

What is Claimed is:

1. A method for performing data integrity process,
comprising:
selecting a cyclic redundancy code ("CRC") mode
5 from amongst append, validate and keep, and
validate and remove mode.
2. The method of Claim 1, wherein if the append mode
is selected, then CRC is appended after each data
block boundary.
- 10 3. The method of Claim 1, wherein if validate and keep
mode is selected, then CRC accompanying any data is
compared to CRC that may have been accumulated and
if an error occurs after the comparison, an
interrupt is generated.
- 15 4. The method of Claim 1, wherein if validate and
remove mode is selected, then CRC is first
validated and then CRC is removed before data is
sent out.
5. The method of Claim 2, wherein a CRC seed value is
20 incremented for each data block providing a unique
CRC value for each data block.
6. The method of Claim 5, wherein CRC data and an
optional data field ("info") follow the actual data
block.

7. A system for performing data integrity process,
comprising:
CRC logic that allows firmware running on an
adapter to select one of plural CRC modes including
5 append, validate and keep, and validate and remove
mode.
8. The system of Claim 7, wherein during append mode,
a CRC engine determines the CRC for each data block
and CRC seed value is incremented for each data
10 block such that each data block has a unique CRC
value.
9. The system of Claim 8, wherein each data block has
a CRC value and an optional field where custom
information may be added ("info data").
- 15 10. The system of Claim 7, wherein during the validate
and keep mode, the CRC engine compares CRC for the
data with accumulated CRC information and CRC is
sent out with data.
11. The system of Claim 10, wherein an interrupt is
20 generated if an error occurs after the comparison.
12. The system of Claim 7, wherein during the validate
and remove mode, the CRC engine compares CRC for
the data with accumulated CRC information and CRC
information is removed before data is sent out.

13. A data format with a data block and a CRC block
used for performing data integrity process,
comprising:
an optional field("info data") that allows a custom
5 or generic field to be added to the data and CRC
block.
14. An adapter in a RAID controller that is coupled to
a host on one side and a storage media on another
side, comprising:
10 CRC logic that can perform data integrity process
using one of plural CRC modes including append,
validate and keep, and validate and remove mode.
15. The system of Claim 14, wherein during append mode,
a CRC engine determines the CRC for each data block
15 and CRC seed value is incremented for each data
block such that each data block has a unique CRC
value.
16. The system of Claim 15, wherein each data block
has a CRC value and an optional field where custom
20 information may be added ("info data").
17. The system of Claim 14, wherein during the validate
and keep mode, the CRC engine compares CRC for the
data with accumulatted CRC information and CRC is
sent out with data.

18. The system of Claim 17, wherein an interrupt is generated if an error occurs after the comparison.
19. The system of Claim 14, wherein during the validate and remove mode, the CRC engine compares CRC for
5 the data with accumulated CRC information and CRC information is removed before data is sent out.
20. The system of Claim 14, wherein the CRC logic is functionally coupled to a PCI and/or PCI-X interface.